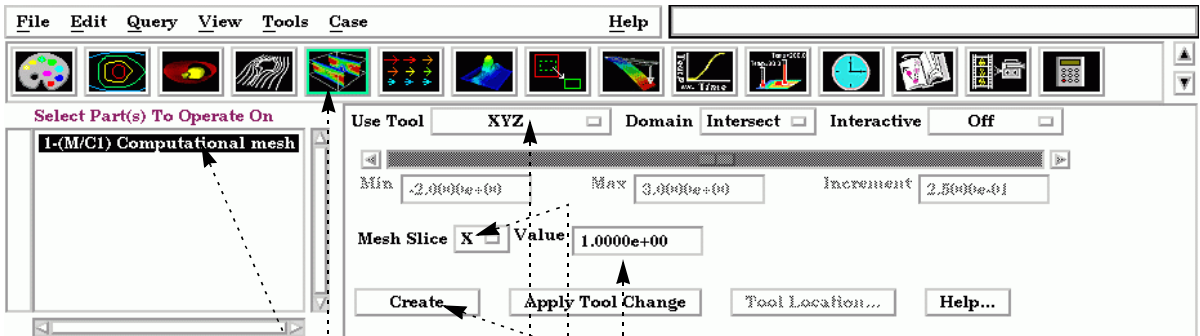Create XYZ Clips

INTRODUCTION

An XYZ clip is a 1D or 2D slice through 2D or 3D meshes (structured or unstructured). The resulting clip is a 1D or 2D mesh slice where one of the dimensions (*e.g.* X) is held constant (or fixed) while the other one or two dimensions (*e.g.* Y and Z) vary in reference to the local frame of the mesh.   XYZ clips can be interactively animated throughout the range of the fixed dimension by manipulating a slider. The minimum, maximum, and step size of the range of the interactive fixed dimension can be set by the user.

BASIC OPERATION

1. Select the parent part.

2. Click the Clip icon.

3. Select XYZ from the Use Tool pulldown.

4. Select the desired fixed dimension from the Mesh Slice pulldown.

5. Enter the value for the fixed dimension in the Value text field and press return.

6. Click Create.

Note that you can change the fixed dimension of an XYZ clip at any time (with the Mesh Slice pulldown). If you change the numeric value, remember to press return for the change to take effect.
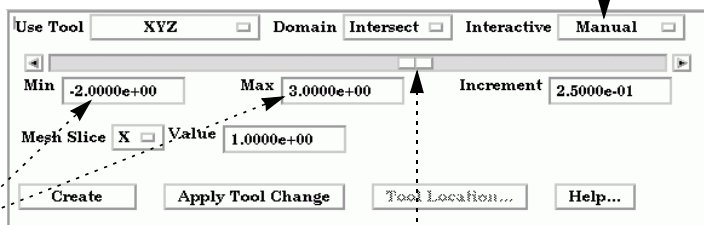
ADVANCED USAGE

Interactive XYZ Clipping

You can interactively sweep through the range of the fixed dimension by adjusting a slider with the mouse.
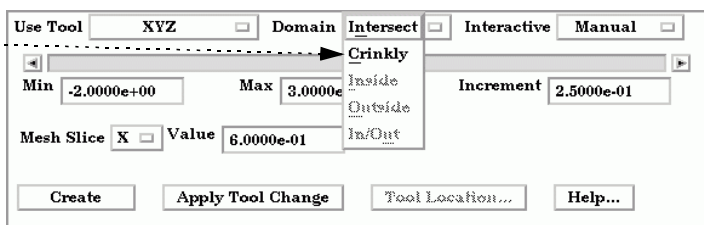
1. **Double-click the desired XYZ clip part in the main parts list.**

2. **Change Interactive to Manual to enable sweeping.**

3. **If desired, enter values for the Min, Max, and Increment to override the defaults (remember to press return).**

4. **Adjust the slider with the mouse.**

Use Tool	XYZ		Domain	Intersect		Interactive	Manual	

Min -2.0000e+00   Max 3.0000e+00   Increment 2.5000e-01

Mesh Slice X ▢ Value 1.0000e+00

Create   Apply Tool Change   Tool Location...   Help...

Crinkly XYZ Clipping

You can check the integrity of your mesh by clipping with a crinkly intersection. Specifying a crinkly domain results in a part composed of all the elements that intersect the mesh slice value.

1. **Change the Domain to Crinkly**

Use Tool	XYZ		Domain	Intersect		Interactive	Manual	

Crinkly
Inside
Outside
In/Out

Min -2.0000e+00   Max 3.0000e   Increment 2.5000e-01

Mesh Slice X ▢ Value 6.0000e-01

Create   Apply Tool Change   Tool Location...   Help...

Clipping Plane Animation

Although you can interactively sweep an XYZ clip through a mesh, it is sometimes desirable to have EnSight automatically calculate a series of XYZ clips for you. These can then be replayed (as fast as your graphics hardware will permit) using EnSight's Flipbook Animation facility. See **How To Create a Flipbook Animation** for more information.

SEE ALSO

Introduction to Part Creation
How To Create a Flipbook Animation

Other clips:
How to Create Clip Lines
How to Create Clip Planes
How to Create Quadric Clips
How to Create IJK Clips
How to Create XYZ Box Clips.

User Manual: **Clip Create/Update**